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**Natural Resources
Conservation Service**

Northern
Plains
Region

Lincoln,
Nebraska

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Progress Report For 2000

Technology Action Plan Northern Plains Region

Introduction

This is a summary of the progress in implementing work plans for the six initial technology issues in the Northern Plains Regional Technology Action Plan. These initiatives comprise the nucleus of the Regional Technology Action Plan. The plan focuses collective state resources on a few, significant technology issues that State Conservationists (STC) and their technology leaders agree are a top priority. To become a top priority, an issue had to affect nearly every state in the region. In addition, working together on an issue had to result in:

- More effective and efficient accomplishment of the technology needs,
- Improvement in the consistent application of technology across state and regional boundaries, and
- The strengthening of employee technical expertise.

Technology Structure

Over the past two years the structure for delivering technology in the region has changed. Each State has a State Technology Contact that is responsible to insure that field level technology needs are being met and technical information is reaching field employees. They also monitor technology and training within states, and recommend technical staffing needs. The Regional Conservationist selected a Regional Technology Specialist to be responsible for implementation of the Regional Technology Action Plan and for overall leadership of the Regional Technology Work Group (RTWG). This person also liaisons with other regional technology work groups and with National Centers and Institutes. The new technology delivery system is designed to allow technical specialists to better support field operations and customer needs.

The Regional Technology Work Group is responsible for taking a broader look at technology in the region. They are expected to identify and meet field office technical needs that go beyond state boundaries, and to provide support for specialized technology needs. Institutes and Centers will connect with the field technology delivery system through the RTWG.

Six Initial Issues

Based on the recommendations of State Technology Contacts and plans developed by teams of specialists, the Regional Leadership Team agreed to devote 45.2 staff years in FY 2000 to move forward to:

	FY 2000 Staff Years
1. Complete Ecological Site Descriptions and Forage Suitability Indexes	13.1
2. Develop a Stream Restoration and Assessment Methodology	10.1
3. Prepare Technical Guidance for Agricultural Waste Management	3.7
4. Update All Technical Standards in FOTG Section IV	4.2
5. Develop a Review Process for Class VI, VII and VIII Engineering Designs	3.7
6. Equip Field Employees to Address Selected Environmental Compliance Issues	10.4
Total Commitment	45.2

Because of the significant commitment of staff resources to these six issues, the Regional Leadership Team has been monitoring progress closely. They receive quarterly verbal updates from task leaders through the Regional Technology Specialist, as well as bi-annual, written progress updates. At the end of FY 2000, STCs met with the Regional Technology Workgroup to evaluate progress and commit FY 2001 staff resources to technology issues

Ecological Site Descriptions and Forage Suitability Groups

Charge. By September 2006, develop, convert and correlate approximately 2,000 range/grazable woodland sites to ecological site descriptions (ESD), and develop and correlate 1,000 forage suitability indexes (FSI).

Approach. Use the Northern Plains' nationally recognized protocol for developing multi-state ecological site descriptions. A 1999 Grazing Lands Technical Team survey of ecological site description status and staff capability was used as a basis for the initial plan development. The planning group also conducted a similar survey for Forage Suitability Groups (status and staff capability). The plans call for these descriptions to be developed by MLRAs to gain efficiency.

Milestones.

- FY 2000: Complete work in 8 MLRAs and 265 ESD/FSI.
- FY 2001: Complete work in 8 MLRAs and 335 ESD/FSI.
- FY 2002: Complete work in 10 MLRAs and 335 ESD/FSI.
- FY 2003: Complete work in 10 MLRAs and 465 ESD/FSI.
- FY 2004: Complete work in 11 MLRAs and 465 ESD/FSI.
- FY 2005: Complete work in 10 MLRAs and 480 ESD/FSI.
- FY 2006: Complete work in 12 MLRAs and 480 ESD/FSI.

Year 2000 Progress.

About 40% of the 265 ecological site descriptions were completed in FY 2000. While this percentage appears low, it actually reflects the most intense part of the work-the start-up activities. Since the majority of the start-up activities are complete the group anticipates 80-100%

completion by year-end 2001.
Accomplishments during the year include:

- Established a local work group in each of the 8 MLRA's with the charge to complete field investigations and technical writings for the site descriptions. Each MLRA has a designated coordinator who serves as a core member of the ESD/FSI task group to help with overall implementation of the initiative.
- Developed draft Reference Manual to assist writing the Ecological Site Descriptions, with instructions on: general characteristics, physiographic features, climate features, influencing water features, representative soil features, plant communities, ecological site interpretations, and supporting documentation.
- Developed guidance document entitled: "Standard Procedures for Development of Ecological Site Descriptions and Forage Suitability Groups in Northern Plains." The guidance document describes responsibilities and coordination activities, format and review of the descriptions and indexes, operation and function of the local work group and correlation of soil and site characteristics.
- Completed a comprehensive sorting of soil characteristics from Soils NASIS data base into initial Forage Suitability Groups. To complete this task, team members develop data base search and query routines to sort the soils in groupings based on various chemical and physical soil characteristics. More than 125 query routines were developed that provided forage suitability groups for each of the 69 MLRA's.
- Developed Range Inventory Worksheet and instructions for conducting field investigations.
- Developed plant community transition models that describe different states of species composition and vegetative evolutions of the site.
- Developed a progress tracking system for ESD & FSI that is be Web based to allow for optimum efficiency in record keeping and frequent monitoring and evaluation of progress.

Leadership & Staff Year Commitment. Task Leader: Chuck Ring, Wyoming, with assistance from Stan Boltz, South Dakota; Task Sponsor: Myron Senechal, North Dakota. FY 2000 and 2001 Staff Year Commitment: 13.1

Stream Restoration

Charge. By December 2000, provide NRCS employees with:

- Principles of stream dynamics, assessment of condition & restoration practices
- Inventory and evaluation techniques of stream system assessment
- Processes and techniques that improve stream conditions
- Technical assistance skills to assist landusers treat stream & riparian areas

Approach. Develop consistent technical materials and have states ready to train employees

Milestones.

- January 2000: Compile assessment, inventory and monitoring techniques.
- November 2000: Develop processes and techniques to be used to plan and apply measures to improve stream conditions.
- December 2000: Provide the knowledge and skills to assist landusers in the principles of stream dynamics,

assessment of condition, and management.

Year 2000 Progress.
This task is nearly completed and will require only minimal staff resources to complete in 2001. Among the accomplishments last year:

- Developed a technical guidance document entitled: "GPS/GIS Protocol for Stream Assessments, Inventory and Monitoring."
- Developed processes and techniques to be used by NRCS field staff and partners to plan and apply measures to improve stream conditions.
- Developed a Technical Report on Operation and Maintenance Guidelines for stream restoration activities in the Northern Plains Region.

Leadership & Staff Year Commitment.
Task Leader: Forrest Berg, Montana; Task Sponsor: Ken Kaul, Montana. FY 2000 Staff Year Commitment: 10.1 Staff Years.

Ag Waste Management

Charge. By December 31, 2000, provide NRCS employees with the skills needed to assist producers in designing and implementing state-of-the-art ag waste storage systems and waste utilization plans.

Approach. Research new technology and gather existing technology from NRCS, state agencies, extension, private industry, etc.; develop training modules on regional basis to insure consistency and prepare states to train employees. The Concrete Design module is the only module delivered by one regional team.

Milestones.

- November 2000: Develop 20 training modules.
- December 2000: Complete training of state specialists.
- November 1999: Develop a job approval certification process.
- December 2000: Implement a public information campaign.

Year 2000 Progress.
This initiative is essentially complete. The remaining action is to package and present the developed material. Among the accomplishments last year:

- Assisted with certification process for both vegetative and engineering practices for the Northern Plains Region.
- Revised initial goal of developing 20 Ag Waste Management training modules because similar project underway at the National Employee Development Center (NEDC). The task team did review and provide recommendations to the NEDC project to complete development of the "Agricultural Waste Management II" modules to be used by employees and partners across the country.
- Eliminated initial goal of implementing a public information campaign. NHQ is producing informational material as part of FY 2000 AFO Business Plan.
- Participated in technical review and editing of national policy on conservation planning certification and CNMP certification.

Leadership & Staff Year Commitment.
Task Leader: Mark Locke, Kansas; Task Sponsor: Lonnie Schulze, Kansas. FY 2000 Staff Year Commitment: 3.7

FOTG Section IV

Charge. By September 2002, complete an update of all Conservation Practice Standards in Section IV of the FOTG and establish a procedure for maintaining Section IV up-to-date.

Approach. Review status of standards in each state; establish and implement a priority system for updating standards, and establish assignments and due dates. The priority system first divided standards into two groups:

- Priority 1, 2, 3 Standards have been updated nationally and are needed for program implementation or other state priorities.
- Priority 4, 5, 6 Standards have not been reviewed for technical accuracy in last 5 years

Then a standard was placed into Priority 1, 2, 3, 4, 5, or 6 based on the number of states indicating a need for a standard. The more states requesting a standard, the higher the priority.

Milestones.

- September 2000: Update 36 standards (Priorities 1 & 2) in each state.
- September 2001: Update 43 standards (Priorities 3 & 4) in each state.
- September 2002: Update 56 standards (Priorities 5 & 6) in each state.

Year 2000 Progress.
About 40 percent of the standards scheduled to be updated by 2002 are complete. Another 15% are under development.

The task group plans to increase collaboration between the seven states this year in an effort to reduce unnecessary duplication. This action will build upon a February 2000 workshop on developing FOTG practice standards according to National policy and standards. Twenty technical specialists in the region completed the training.

The task group has also recommended that technical disciplines from all the states meet and work collaboratively as new updated national standards are released. Here is a state-by-state update:

- Colorado. Currently, 21 standards are complete and another 6 of the 30 standards scheduled for completion in FY-2000 are started. Four standards scheduled for 2001 & 2002 are also complete. This means 22 percent of the goal in the overall multi-year plan is complete with an additional 5 percent under development.
- Kansas. Eighteen standards of the 34 scheduled for completion in FY 2000 are complete and 13 others have been started. Approximately 22 standards and scheduled for completion 2001 and 2002 have been updated or technically reviewed and another 4 started. This means 35 percent of the goal in the overall multi-year plan is complete with an additional 15 percent in the development stage.
- Montana. Twenty-two of the 33 standards scheduled this year have been completed. Seven other standards scheduled for completion this year have been started. Of the standards scheduled for 2001 and 2002, Montana has completed 14 and started on another 10. This means 32 percent of the goal in the overall multi-year plan is complete with an additional 15 percent in the development stage.
- Nebraska. Eighteen standards have been updated and 14 of the 34 scheduled for completion this year have been started. Of the standards scheduled

for completion in 2001 and 2002, Nebraska has updated 5 standards and started on 6 others. This means 20 percent of the goal in the overall multi-year plan is complete with an additional 17 percent in the development stage.

- North Dakota. Six of the 28 standards scheduled for 2000 are completed and 23 other standards have been started for development. This means 5 percent of the goal in the overall multi-year plan is complete with another 19 percent under development.
- South Dakota. All 32 standards scheduled this year are completed. For standards scheduled for 2001 and 2002, 44 have been completed and 17 have been started for review or development. This means 17 percent of the goal established in the overall multi-year plan is complete with another 16 percent under development.
- Wyoming. Eleven of the 17 standards scheduled for this year are completed. Work on 92 standards scheduled for 2001 and 2002 is also complete. This means 84 percent of the goal established in the overall multi-year plan is complete.

Leadership & Staff Year Commitment. Task Leader: Dave Wolff, Colorado; Task Sponsor: Carl Lucero and Gerald Krause, Colorado. FY 2000 Staff Year Commitment: 4.2 and will remain consistent for FY 2001 and may even increase to meet the need.

Engineering Design Review

Charge. By December 31, 2000, propose and implement an engineering review process for Class VI, VII, & VIII designs in the region including the designation of engineers who will perform the reviews.

Approach. Assign staff who will be able to complete reviews needed in FY 2000, then propose an alternative review approach based on

1) An inventory of engineering expertise in the Region;
2) The projected engineering design and review workload for the next 5 years.

The proposal to leadership includes completing reviews using expertise from within and outside NRCS, as well as addressing staffing shortages.

Milestones.

- May 2000: Projected workload inventoried.
- July 2000: Identify shortfalls or concerns.
- December 2000: Formulate review alternatives.

Year 2000 Progress.
This task team's work is complete. Recommendations and alternatives were presented to the Regional Leadership Team (RLT) in a final report that addressed concerns identified in the analysis, including impacts and anticipated staff shortages. That report was a result of the following actions:

- Completed an inventory of the engineering expertise in region. Individuals self-evaluated their skills in a number of critical areas for engineering activities.
- Completed an inventory of the current engineering workload and developed a standard format of tracking project schedules in a database.
- Conducted analysis of the inventory data to determine the total staff needed per year for design reviews and distribution of the existing expertise.

Leadership & Staff Year Commitment. Task Leader: Owen Kvittem, Nebraska;

Task Sponsor: Duane Klamm, Wyoming.
FY 2000 Staff Year Commitment: 3.7

Environmental Compliance

Charge. By December 2002, equip NRCS field and partner employees with improved approaches to deal with selected environmental compliance issues

Approach. Identify environmental compliance issues and barriers, survey current status of environmental compliance and training needs, and develop tools and deliver training.

Milestones

- December 2000: Improved field office reference and documentation forms, and inform NRCS staff and the public on the importance of environmental compliance.
- August 2002: Develop tools and deliver training.
- August 2002: Develop quality tools and procedures for the management and oversight of environmental compliance.

Year 2000 Progress.

This task team's activities have been put on hold pending National direction and initiatives. However, the group was able to make significant progress during the year including:

- Recommended Knowledge, Skill and Ability (KSA) levels for various technical positions and grades to address environmental concerns. The KSA list was provided to all states as a recommended supplement to their General Manual.
- Conducted Regional Environmental Compliance workshop with participants from NHQ, OGC, and partner organizations that describe current interests and responsibilities for compliance with policy and regulations.
- Developed an automated process to track state and local environmental concerns. The process allows states or areas to develop a comprehensive list of all-applicable laws or regulations that NRCS employees need to consider in order to carry out conservation activities.
- Surveyed all state specialists for input on the most pressing issues relative to environmental compliance. The survey resulted in a list of eleven priority environmental laws or categories.
- Assisted NHQ with the improvement of field office documentation on environmental evaluations of practice effects on the CPA-52 form, and provided input on edits and revisions to the draft Environmental Compliance Handbook.
- Developed a strategy plan to establish a training cadre. The plan calls for two persons with KSA level 5 skills to train state specialists at four locations across the region. The workshops would enable state specialists to deliver training to field personnel to achieve better compliance with environmental policies.
- Developed an information and marketing strategy plan for NRCS employees, customers and partner organizations to better understand environmental compliance issues and concerns. The plan will include articles for re-print about important environmental topics and a more general automated PowerPoint presentation.
- Developed an issue paper that outlined management choices needed to be addressed for efficient implementation of environmental compliance.

Leadership & Staff Year Commitment.
Task Leader: Mark Anderson, North Dakota; Task Sponsor: Ron Nadwornick, South Dakota. FY 2000 and 2001 Staff Year Commitment: 10.4